**Chemistry Test Review**

**Part 1: Naming and Chemical Formulas**

**A. Review. Give the correct chemical formula for each of the following compounds.**

*Name the following chemical compounds:*

1) NaBr \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) H2SO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) P2O5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) Ti(SO4)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) FePO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6) K3N \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7) SO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8) CuOH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9) Zn(NO2)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10) V2S3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11) HBr \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) H2SO4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Write the formulas for the following chemical compounds:*

11) silicon dioxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) nickel (III) sulfide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

13) manganese (II) phosphate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14) carbonic acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15) diboron tetrabromide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16) hydroiodic acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17) potassium carbonate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18) ammonium oxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

19) tin (IV) selenide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20) carbon tetrachloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 2: Chemical formual, Balancing, Types of Reactions**

1. sulfur + oxygen → sulfur dioxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. iron (II) + sulfuric acid → iron (II) sulfate + hydrogen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. hydrogen + nitrogen → ammonia (NH3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. hydrogen + chlorine → hydrogen chloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. carbon + water → carbon monoxide + hydrogen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. calcium oxide + water → calcium hydroxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. phosphorus + oxygen → diphosphorus pentoxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. hydrochloric acid + sodium hydroxide → sodium chloride + water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. barium chloride + sulfuric acid → barium sulfate + hydrochloric acid \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. aluminum sulfate + calcium hydroxide → aluminum hydroxide + calcium sulfate \_\_\_\_\_\_\_\_\_\_\_\_

11. ethane (C2H6) + oxygen → carbon dioxide + water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. aluminum oxide → aluminum + oxygen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. \_\_\_ P4 + \_\_\_ O2 🡪 \_\_\_ P4O10 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word:

1. \_\_\_ NaCO3 + \_\_\_ LiOH 🡪 \_\_\_ Li2(CO3) + \_\_\_ NaOH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word:

1. \_\_\_ H2(SO4) + \_\_\_ BaOH 🡪 \_\_\_ H2O + \_\_\_ Ba(SO4) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word:

1. \_\_\_ Fe + \_\_\_ S8 → \_\_\_ Fe2S3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word:

1. \_\_\_ Cu + \_\_\_ O2 →\_\_\_ CuO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word:

1. \_\_\_ H2O →\_\_\_ H2 + \_\_\_ O2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word:

1. \_\_\_ Fe + \_\_\_ H2O →\_\_\_ H2 + \_\_\_ Fe2O3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Word:

1. \_\_\_ AsCl3 + \_\_\_ H2S →\_\_\_ As2S3 + \_\_\_ HCl \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 3: Other concepts**

Review: Your “predicting” worksheet

pg. 252 #1-7, 8, 9, 10, 19, 28

pg 258 #2-7, 8 (just give skeleton chemical equation), 9 (do not need to explain), 11, 13, 17

**Answers Part 1**

*Name the following chemical compounds:*

1) **sodium bromide**

2) **sulfurous acid**

3) **diphosphorus pentoxide**

4) **titanium(IV) sulfate**

5) **iron(III) phosphate**

6) **potassium nitride**

7) **sulfur dioxide**

8) **copper(I) hydroxide**

9) **zinc nitrite**

10) **vanadium(III) sulfide**

**11) hydrobromic acid**

12) **sulfuric acid**

*Write the formulas for the following chemical compounds:*

11) **SiO­2**

12) **Ni2S3**

13) **Mn3(PO4)2**

14) **H2CO3**

15) **B2Br4**

16) **HI**

17) **K2CO3**

18)  **(NH4)2O**

19) **SnSe2**

20) **CCl4**

**Answers Part 2**

1. S8 + 8O2 → 8SO2 combustion

2. Fe + H2SO4 → FeSO4 + H2 single displacement

3. 3H2 + N2 → 2NH3 synthesis

4. H2 + Cl2 → 2HCl synthesis

5. C + H2O → CO + H2 Single displacement

6. CaO + H2O → Ca(OH)2 synthesis

7. P4 + 5O2 → 2P2O5 combustion

8. HCl + NaOH → NaCl + H2O neutralization

9. BaCl2 + H2SO4 → BaSO4 + 2HCl double displacement

10. Al2(SO4)3 + 3Ca(OH)2 → 2Al(OH)3 + 3CaSO4 neutralization

11. 2C2H6 + 7O2 → 4CO2 + 6H2O combustion

12. 2Al2O3 → 4Al + 3O2 decomposition

1. Phosphorus + Oxygen Gas → tetraphosphorus decaoxide combustion
2. Sodium carbonate + lithium hydroxide → lithium carbonate + sodium hydroxide

Double displacement

1. Sulfuric acid + barium hydroxide → water + barium sulfate neutralization
2. Iron + sulfur → iron (III) sulfide synthesis
3. Copper + oxygen gas → copper (II) oxide combustion
4. Water → hydrogen gas + oxygen gas decomposition
5. Iron + water → hydrogen gas + iron (III) oxide single displacement
6. Arsenic chloride + hydrosulfuric acid → arsenic sulfide + hydrochloric acid double displacement